



Figure 4-4. MDOF Format

Table 4-6. Explanation of MDOF Format

Bit	Description
1-13	SIC (binary)
14-17	VID (binary)
18-26	Day of year (binary)
27-30	Format type (binary) $\frac{27}{0} \frac{28}{1} \frac{29}{1} \frac{30}{1}$
31-34	Time of day (binary-tenths of seconds) $\frac{\text{BIT}}{\text{VALUE}} = \frac{31}{0.1} \frac{32}{0.2} \frac{33}{0.4} \frac{34}{0.8}$
35-51	Time of day (binary-seconds) $\frac{\text{BIT}}{\text{VALUE}} = \frac{35}{1} \frac{36}{2} \dots \frac{51}{65536}$
52-60	Site ID (Refer to Appendix C, Table C-2). Note To decode the angle fields (bits 61-79/80-98), convert to decimal and multiply by the granularity (0.0006866455 degree). If the result is between 180 and 360 degrees, the angle is negative (except for the azimuth reading on az-el trackers) and can be determined by subtracting 360 degrees from the result.
61-79	Angle 1 (X or azimuth) (LSB = 0.0006866455) (binary)
80-98	Angle 2 (Y or elevation) (LSB = 0.0006866455) (binary)
99-123	Range (LSB = 1.7859375 m) (binary)
124-171	Doppler (counts of 240 MHz + 1000 fd) (LSB = 1 cycle)*
172-173	One-, two-, or three-way data: $\begin{array}{ll} \frac{172}{0} \frac{173}{0} & = 1\text{-way} \\ 1 & 0 = 2\text{-way} \\ 1 & 1 = 3\text{-way} \end{array}$
174	R/T (real/test) 1 = real data

Table 4-6. Explanation of MDDF Format (cont)

Bit	Description
175-176	Geo (antenna geometry): $\frac{175}{0} \frac{176}{0}$ = az-e1 $1 \quad 0$ = (X-Y) (+X = south) $1 \quad 1$ = (X-Y) (+X = east)
177-180	Toggle bits: on one frame: $\frac{177}{1} \frac{178}{0} \frac{179}{1} \frac{180}{1}$ on next frame: $\frac{177}{0} \frac{178}{1} \frac{179}{0} \frac{180}{0}$
181	L (liftoff); 1 = liftoff has occurred
182	P (plunge mode); 1 = plunge
183-184	P/W (Pulse width) $\frac{183}{0} \frac{184}{0}$ = 1.0 μ sec $1 \quad 0$ = 2.4 μ sec $0 \quad 1$ = 5.0 μ sec (0.25 sec for WFC radars) $1 \quad 1$ = 10.0 μ sec (0.5 sec for BDA and WFC radars)
185	RI (refraction correction) 0 = out, 1 = in
186	DI (droop) 0 = out, 1 = in
187	PO (paramp) 0 = off, 1 = on
188	RO (radiation) 0 = off, 1 = on
189	LO 0 = single LO, 1 = dual LO
190	B/S (beacon/skin) 0 = skin, 1 = beacon
*191	T (track bit) 0 = off, 1 = on
**192	Q (quality bit) 0 = bad, 1 = good
<p>*The on-track bit (No. 191) is present under the following conditions (or equivalent):</p> <ul style="list-style-type: none"> a. All three servos are in auto mode; i.e., have no designation/acquisition source (including manual) selected. b. Radiation ON. c. ADRAN/DIRAM range verified. d. Angle control ADRAN/DIRAM (not autotrack). e. ADRAN/DIRAM not coast. <p>**Q-bit ON corresponds to a 6-dB or greater signal-to-noise ratio plus a valid on-track bit (bit 191).</p>	

Table 4-6. Explanation of MOOF Format (cont)

Bit	Description		
193-195	Mode:	193	194 195
	0	0	= manual
	1	0	= autotrack
	0	1	= computer drive
	1	1	= on-axis orbital
	0	0	= on-axis powered flight
	1	0	= on-axis coast
	0	1	= autotrack coast
196	R (range)	1	= range good, 0 = range bad
197	A (angles)	1	= angles good, 0 = angles bad
198	DOP (Doppler)	1	= Doppler good, 0 = Doppler bad
199	DD (destruct Doppler)	1	= destruct Doppler
200	LFI (last frame indicator)	1	= last frame
201-224	Cyclic redundancy code		
Note			
The TRACQ Program (SCAN Control No. 13-601.X) does not generate a CRC Code for MOOF data. Zeros are output in these positions.			
225-240	Sync bits will have the following pattern: 0-0-0-1-1-0-1-0-0-0-0-1-1-0-1-0		